

Appl. No. : 10/067,628
Filed : February 4, 2002

REMARKS

In response to the Office Action mailed January 16, 2003, Applicant has amended the application as above. No new matter is added by the amendments as discussed below. Applicant respectfully requests the entry of the amendment and reconsideration of the application in view of the amendments and the remarks set forth below.

Discussion of Claim Amendments

Claim 38 has been canceled without prejudice. Claims 1, 5, 9, 19, 20, and 32 have been amended. Upon the entry of the amendments, Claims 1-15, 19-24, 28-37 are pending in this application.

The amendments to Claim 1 are supported, for example, by original Claim 2. The amendments to Claims 1, 5, 9, 19, and 20 are merely made for clarification, and do not narrow the scope of the protection. The amendments to Claim 32 are supported, for example, by the specification at page 9, lines 25-27, and Figures 1 and 2. Thus, no new matter is added by the amendments. Applicant respectfully requests the entry of the amendments.

The specific changes to the amended claims are shown on the previous pages on separate sheets entitled **AMENDMENTS TO THE CLAIMS**. On this set of pages, the insertions are underlined while the ~~deletions are struck through~~.

Discussion of the Drawings

The Office Action states that the proposed drawing correction filed on October 29, 2002 was approved by the Examiner, but that corrected drawings are required in reply to this Office Action.

However, Applicant has already submitted the formal drawings for corrected Figures 4 and 5 along with a marked version of the drawings in response to the previous Office Action mailed July 25, 2002. Thus, Applicant assumes that no response is necessary in connection with the corrected drawings. If the Examiner would like a courtesy copy of the same, he is respectfully requested to contact the undersigned.

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Discussion of Rejection of Claims under 35 U.S.C. § 102(b)

The Examiner has rejected Claims 1-3, 9-10, 13-14, 19-20, 24, 28, 30-38 under 35 U.S.C. § 102(b) based on either Allard, et al. (U.S. Patent No. 4,743,964) or Carollo (U.S. Patent No. 5,912,650). Claim 38 has been cancelled as indicated above.

Rationale of 35 U.S.C. 102

“For a prior art reference to anticipate a claim under 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference.” *Diversitech Corp. v. Century Steps, Inc.*, 850 F.ed 675, 677, 7 USPQ 2d 1315, 1317 (Fed. Cir. 1988). Applicant respectfully submits that neither of the Allard and Carollo references anticipates independent Claims 1, 9, 19, 20, and 32 as discussed below because both of the prior art references lack at least one of the limitations recited in each of the independent claims.

Discussion of Patentability of Independent Claims 1, 9 and 19

Claim 1 recites, among other things, left and right plane image display devices for simultaneously outputting *the received inverted* left and right plane images. Each of Claims 9 and 19 has a similar limitation. However, Allard does not disclose or teach the above limitations as discussed below.

The monitors (12, 22) of the Allard reference do not output received inverted images. Instead, the Allard patent discloses that the monitors (12, 22) simply display (output) the images received from the videodisk readers (11, 21), and the mirrors (14, 24) invert the output (displayed) images (Figure 1). That is, Allard does not disclose “the display devices which output received inverted images” recited in Claims 1, 9, and 19

The Examiner asserts that in the Allard reference the monitors (12, 22) and the first set of mirrors (14, 24) can be considered in combination as the “display device” equivalent to that of the claimed invention. Even though it is assumed that the combination of the monitors (12, 22) and the mirrors (14, 24) can be considered as the claimed “display device(s),” the Allard reference lacks the inverting devices for receiving and inverting the plane images recited in Claims 1, 9 and 19. If the combination of the monitors (12, 22) and first set of mirrors (14, 24) corresponds to the claimed display device, Allard discloses only the assumed combined display device (monitors (12, 22) plus first set of mirrors (14, 24)) and a second set of mirrors (15, 25).

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The second set of mirrors (15, 25) at best corresponds to the claimed mirror(s). That is, Allard fails to show the inverting devices for receiving and inverting the plane images recited in Claims 1, 9 and 19. Thus, each of independent Claims 1, 9 and 19 is patentable over the Allard reference.

Discussion of Patentability of Independent Claim 20

Claim 20 recites, among other things, *after the receiving and inverting*, displaying the inverted first and second plane images. However, Allard does not disclose or teach the above limitations as discussed below. As shown in Figure 1 of the Allard reference, both of the inversions in the mirrors (14, 24; 15, 25) are clearly carried out after the display of the image in the monitors (12, 22). In contrast, in the claimed invention, the displaying is performed after the receiving and inverting of the images. Thus, independent Claim 20 is patentable over the Allard reference.

Discussion of Patentability of Independent Claim 32

Claim 32 recites, among other things, that the first and second display devices *directly display the inverted images without use of mirrors*. However, Allard does not disclose or teach the above limitations as discussed below. Referring to Figure 1, the Allard reference clearly shows that the monitors (12, 22) display (non-inverted) images and the two sets of the mirrors (14, 24; 15, 25) invert the output images. That is, the monitors (12, 22) do not directly display the inverted images.

In addition, even though the combination of the monitors (12, 22) and first set of mirrors (14, 24) can be assumed as one display device, the assumed combined display device does not display the inverted images *without use of mirrors*. This is because the assumed combined display device of Allard necessarily includes the first set of mirrors (14, 24) to rely on the assumption. Thus, the Allard reference does not disclose or teach the first and second display devices which directly display the inverted images without use of mirrors recited in Claim 32, therefore independent Claim 32 is patentable over the Allard reference.

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Carollo does not inherently disclose the claim limitations
recited in Claims 1, 9, 19, 20, and 32

1. Rationale of Inherence Rejection under 35 U.S.C. § 102

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. APP. & Inter. 1990). MPEP 2112. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. That is, the missing element or function *must necessarily result from the prior art reference*. *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (C.C.P.A. 1981).

2. Carollo does not inherently disclose the above claimed features recited in Claims 1, 9, 19, 20 or 32.

The Examiner asserts that in the event that the display devices of the Allard reference are not considered to be the equivalent to the display devices of the claimed invention, Carollo shows the same display devices as of the claimed invention. The Examiner further asserts that since the mirrors (109) inherently invert the images, the image generators (101, 105) would likewise inherently invert the images in order that the resulting image be viewed with proper orientation. However, it is respectfully submitted that the Carollo reference does not inherently disclose either "the display devices that output the inverted images" or "displaying inverted images" recited in Claims 1, 9, 19 or 20 as discussed below.

Applicant submits herewith a Declaration (a reference drawing is attached and marked "Exhibit A") under 37 CFR § 132 signed by the inventor. As stated in the Declaration, there exists a three-dimensional display system having display devices which do not need to invert images therein, and thus can be used in the display system as disclosed in the Carollo patent (Figure 1). Thus, Applicant respectfully submits that the display devices (image generators; 101, 105) of the Carollo reference do not *necessarily* invert the images.

In view of the above, the Examiner has failed to provide the basis for rejecting the independent claims over the Carollo reference in that not every element of each claim is

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identically disclosed there. Therefore, Applicant respectfully submits that independent Claims 1, 9, 19, 20 and 32 are patentable over the prior art. Withdrawal of the rejections is respectfully requested.

Summary

In view of the above, each of independent Claims 1, 9, 19, 20 and 32 is patentable over either Allard or Carollo. The remaining claims depend from one of corresponding base Claims 1, 9, 19, 20, and 32 and further define additional technical features. In view of patentability of their base claims and further additional features, the dependent claims are also patentable.

Discussion of Rejection of Claims under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 4 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Allard, et al. (U.S. Patent No. 4,743,964). The Examiner has also rejected Claims 5-8, 11, 12, 15, 21, 22 and 29 under 35 U.S.C. § 103(a) as being unpatentable over Allard, et al. (U.S. Patent No. 4,743,964) in view of Ricks (U.S. Patent No. 4,190,856).

Rationale of 35 U.S.C. 103

In order to provide a *prima facie* showing of obviousness under 35 U.S.C. § 103, all the claim limitations must be taught or suggested by the prior art. *See, e.g., In re Royka*, 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974). MPEP 2143.03. In the case of the presently claimed invention, the prior art does not teach or suggest all of the claim limitation as discussed below.

Discussion of Patentability of Claims 4 and 23

Claims 4 and 23 depend from Claims 1 and 20, respectively, and further define additional technical features. In view of patentability of their base claims and further additional features, dependent Claims 4 and 23 are also patentable.

Discussion of Patentability of Claims 5-8, 11-12, 15, 21-22 and 29

Claim 5 recites, among other things, first left and right plane image display devices for simultaneously outputting the received inverted left and right plane images. As discussed above with regard to patentability of Claims 1, 9 and 19, the limitation "display devices for outputting

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the received inverted images” is not disclosed in the Allard reference either explicitly or inherently. In addition, the Ricks reference does not disclose the above limitations, either. The Ricks patent at best discloses generating a three dimensional image using “sectioning” technology that forms a three-dimensional picture by stacking a set of cross-sectional representations along a common optical axis (Figure 2; column 2, line 43 through column 3, line 23).

In view of the above, neither Allard nor Ricks discloses, teaches or suggests the claim limitation “display devices for outputting the received inverted images” recited in Claim 5. Therefore, independent Claim 5 is patentable over the prior art references. Regarding Claims 6-8, they depend from Claim 5 and further define additional technical features. In view of patentability of their base claim and further additional features, the dependent claims are also patentable.

Regarding Claims 11-12, 15, 21-22, and 29, they depend from one of the base claims (Claims 5, 9, and 20) and further define additional technical features. In view of patentability of their base claims and further additional features, the dependent claims are also patentable. Thus, withdrawal of the rejections is respectfully requested.

Discussion of Priority Document

The Examiner has indicated that a certified copy of the priority Korean application, No. 10-2000-30643, has not been filed. In reply, Applicant submits a certified copy of the priority application herewith.

Discussion of Substitute Declaration

Pursuant to 37 CFR §1.67(a), Applicant submits a substitute Declaration to correct a typographical error in the application number of the priority Korean application. The original Declaration submitted April 16, 2002, states that a priority application number is 10-2000-30643. However, the correct priority application number is 10-2000-30463. The PCT application (A copy submitted on February 4, 2002) filed June 2, 2001 corresponding to this application confirms that the priority application number is 10-2000-30463. Since Applicant determined the typographical error in the priority application number after he filed a response on October 25,

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2002, in reply to the first Office Action mailed July 25, 2002, the substitute Declaration was not presented earlier.

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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance. If the Examiner has any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the indicated telephone number.

Respectfully submitted,

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